

# Henrik Pedersen

## List of Publications by Year in descending order

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Version: 2024-02-01

100  
papers

419  
citations

1040056

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all docs

102  
docs citations

102  
times ranked

269  
citing authors

#	ARTICLE	IF	CITATIONS
1	Temperature-Independent Fault Detection of Solenoid-Actuated Proportional Valve. IEEE/ASME Transactions on Mechatronics, 2022, 27, 4497-4506.	5.8	6
2	Fault Detection and Diagnosis Methods for Fluid Power Pitch System Components – A Review. Energies, 2021, 14, 1305.	3.1	7
3	Determining Actuator Requirements for Cyclic Varying Pitch Propeller for Ships. Energies, 2021, 14, 6554.	3.1	0
4	Early Detection of Coil Failure in Solenoid Valves. IEEE/ASME Transactions on Mechatronics, 2020, 25, 683-693.	5.8	13
5	Measurements of a Novel Digital Hydraulic Valve Comprising a Cushioning Feature. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2020, 142, .	1.6	3
6	Experimental Validation of Leakage Detection in a Fluid Power Pitch System Using a State Augmented EKF-Approach. , 2020, , .		1
7	Feasibility of Deep Neural Network Surrogate Models in Fluid Dynamics. Modeling, Identification and Control, 2019, 40, 71-87.	1.1	3
8	Systematic Methodology for Reliability Analysis of Components in Axial Piston Units. , 2019, , .		0
9	Investigating Fault Detection and Diagnosis in a Hydraulic Pitch System Using a State Augmented EKF-Approach. , 2019, , .		2
10	Pressure Feedback in Fluid Power Systems – Active Damping Explained and Exemplified. IEEE Transactions on Control Systems Technology, 2018, 26, 102-113.	5.2	17
11	Towards a modelling framework for designing active check valves – a review of state-of-the-art. International Journal of Fluid Power, 2018, 19, 49-64.	0.7	1
12	Analysis and Control of a Self-Contained Hydraulic Winch Drive. , 2018, , .		0
13	A Multi-Agent Evolution Algorithm Used for Input Shaping of a Repetitive Non-Linear Dynamic System. , 2018, , .		0
14	Development of Methodology for Lifetime Calculation for Axial Piston Units. , 2018, , .		0
15	Application of Model Predictive Control in Discrete Displacement Cylinders to Drive a Knuckle Boom Crane. , 2018, , .		3
16	Evaluating the Influence of Leaking Active Check Valves in Digital Displacement® Units. , 2018, , .		0
17	Numerical investigation of switching features of a hydraulic seat valve with annular flow geometry. International Journal of Fluid Power, 2018, 19, 152-164.	0.7	3
18	Reliability based design of fluid power pitch systems for wind turbines. Wind Energy, 2017, 20, 1097-1110.	4.2	9

#	ARTICLE	IF	CITATIONS
19	Discrete Linear Time Invariant Analysis of Digital Fluid Power Pump Flow Control. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2017, 139, .	1.6	8
20	Position Control of an Over-Actuated Direct Hydraulic Cylinder Drive. Control Engineering Practice, 2017, 64, 1-14.	5.5	31
21	Experimental Validation of Flow Force Models for Fast Switching Valves. , 2017, , .		3
22	A Robust Control Concept for Hydraulic Drives Based on Second Order Sliding Mode Disturbance Compensation. , 2017, , .		2
23	An Energy Efficient Hydraulic Winch Drive Concept Based on a Speed-Variable Switched Differential Pump. , 2017, , .		0
24	An Arbitrary Order Adaptive Control Structure With Application to a Hydraulic Winch Drive. , 2017, , .		0
25	Risk-Based Comparative Study of Fluid Power Pitch Concepts. , 2017, , .		2
26	Signal-Based Gas Leakage Detection for Fluid Power Accumulators in Wind Turbines. Energies, 2017, 10, 331.	3.1	10
27	Model-Based Estimation of Gas Leakage for Fluid Power Accumulators in Wind Turbines. , 2017, , .		3
28	Guidelines for Properly Adjusting Pressure Feedback in Systems With Over-Centre Valves. , 2016, , .		3
29	An Analytic Approach to Cascade Control Design for Hydraulic Valve-Cylinder Drives. , 2016, , .		0
30	A Generic Model Based Tracking Controller for Hydraulic Valve-Cylinder Drives. , 2016, , .		2
31	State of the Art Review on Theoretical Tribology of Fluid Power Displacement Machines. , 2016, , .		1
32	Influence of the Lubricant Thermo-Piezo-Viscous Property on Hydrostatic Bearings in Oil Hydraulics. , 2016, , .		1
33	Analysis of the Thermo-Viscous Effect on Friction and Energy Dissipation in Oil Lubricated Interfaces. , 2016, , .		1
34	Reducing Fatigue Loading due to Pressure Shift in Discrete Fluid Power Force Systems. , 2016, , .		2
35	Optimal configuration of a discrete fluid power force system utilised in the PTO for WECs. Ocean Engineering, 2016, 117, 88-98.	4.3	15
36	Reducing pressure oscillations in discrete fluid power systems. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2016, 230, 1093-1105.	1.0	6

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37	On orientation control of suspended blade during installation in wind turbines. , 2015, , .		0
38	Modeling of Dynamic Fluid Forces in Fast Switching Valves. , 2015, , .		2
39	Reliable Fluid Power Pitch Systems: A Review of State of the Art for Design and Reliability Evaluation of Fluid Power Systems. , 2015, , .		5
40	On the Influence of Piston and Cylinder Density in Tribodynamics of a Radial Piston Digital Fluid Power Displacement Motor. , 2015, , .		6
41	Fluid Stiction Modeling for Quickly Separating Plates Considering the Liquid Tensile Strength. Journal of Fluids Engineering, Transactions of the ASME, 2015, 137, .	1.5	14
42	On the application of reynolds theory to thermo-piezo-viscous lubrication in oil hydraulics. , 2015, , .		2
43	Morphological topology generation of a digital fluid power displacement unit using Chebychev-Gr&#x00FC;bler-Kutzbach constraint. , 2015, , .		1
44	A low order adaptive control scheme for hydraulic servo systems. , 2015, , .		0
45	Investigation of Load Reduction Possibilities in Wind Turbines Using a Fluid Power Pitch System. , 2015, , .		0
46	Energy Cost of Avoiding Pressure Oscillations in a Discrete Fluid Power Force System. , 2015, , .		5
47	Comparison of Methods for Modeling a Hydraulic Loader Crane With Flexible Translational Links. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2015, 137, .	1.6	16
48	Optimum Design of a Moving Coil Actuator for Fast-Switching Valves in Digital Hydraulic Pumps and Motors. IEEE/ASME Transactions on Mechatronics, 2015, 20, 2761-2770.	5.8	43
49	Speed-Variable Switched Differential Pump System for Direct Operation of Hydraulic Cylinders. , 2015, , .		11
50	Discrete Learning Control with Application to Hydraulic Actuators. Modeling, Identification and Control, 2015, 36, 215-224.	1.1	1
51	Investigation of New Servo Drive Concept Utilizing Two Fixed Displacement Units. JFPS International Journal of Fluid Power System, 2014, 8, 1-9.	0.3	16
52	Analytical Thermal Field Theory Applicable to Oil Hydraulic Fluid Film Lubrication. , 2014, , .		3
53	On Application of Second Order Sliding Mode Control to Electro-Hydraulic Systems. , 2014, , .		3
54	Control of a 420 kN Discrete Displacement Cylinder Drive for the Wavestar Wave Energy Converter. , 2014, , .		5

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55	Design Method for Fast Switching Seat Valves for Digital Displacement <sup>®</sup> Machines. , 2014, , .		4
56	Oil Stiction in Fast Switching Annular Seat Valves for Digital Displacement Fluid Power Machines. , 2014, , .		4
57	Output Feedback Control of Electro-Hydraulic Cylinder Drives Using the Twisting Algorithm. , 2014, , .		0
58	Finite-time convergent continuous control design based on sliding mode algorithms with application to a hydraulic drive. International Journal of Mechatronics and Automation, 2014, 4, 188.	0.2	1
59	Model based feasibility study on bidirectional check valves in wave energy converters. International Journal of Marine Energy, 2014, 5, 1-23.	1.8	7
60	Asymptotic Approximation of Laminar Lubrication Thermal Field at Low Reduced Peclet and Brinkman Number. Journal of Tribology, 2014, 136, .	1.9	4
61	On/off multi-poppet valve for switching manifold in discrete fluid power force system PTO in wave energy converters. International Journal of Mechatronics and Automation, 2014, 4, 84.	0.2	0
62	Optimum design of seat region in valves suitable for digital displacement machines. International Journal of Mechatronics and Automation, 2014, 4, 116.	0.2	11
63	Topology selection and analysis of actuator for seat valves suitable for use in Digital Displacement pumps/motors. , 2013, , .		3
64	An approach for state observation in dynamical systems based on the twisting algorithm. , 2013, , .		1
65	A novel control approach based on second order sliding modes & its application to hydraulic drives. , 2013, , .		0
66	Optimization of geometry of annular seat valves suitable for Digital Displacement fluid power pumps/motors. , 2013, , .		4
67	Experimental evaluation of control strategies for hydraulic servo robot. , 2013, , .		11
68	Design of a multi-poppet on-off valve for wave energy converters. , 2013, , .		0
69	Investigation and Comparison of Separate Meter-In Separate Meter-Out Control Strategies. , 2013, , .		2
70	Design of Bidirectional Check Valve for Discrete Fluid Power Force System for Wave Energy Converters. , 2013, , .		1
71	Multibody Dynamics of a Fluid Power Radial Piston Motor Including Transient Hydrodynamic Pressure Models in Lubricating Gaps. , 2013, , .		0
72	Simulation of Dynamic Behaviour of a Digital Displacement Motor Using Transient 3D Computational Fluid Dynamics Analysis. , 2013, , .		2

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73	Design and Experimental Validation of Hydraulic Yaw System for Multi MW Wind Turbine. International Journal of Fluid Power, 2013, 14, 27-38.	0.7	4
74	Second Order Sliding Control With State Dependent Gain and its Application to a Hydraulic Drive. , 2013, , .		0
75	Robust Non-Chattering Observer Based Sliding Control Concept for Electro-Hydraulic Drives. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 99-108.	0.4	8
76	Investigation of Self Yaw and its Potential Using a Hydraulic Soft Yaw System for 5 MW Wind Turbine. Wind Engineering, 2013, 37, 165-181.	1.9	3
77	An Approach for Second Order Control With Finite Time Convergence for Electro-Hydraulic Drives. , 2013, , .		0
78	DESIGN AND MODELLING OF FAST SWITCHING EFFICIENT SEAT VALVES FOR DIGITAL DISPLACEMENT PUMPS. Transactions of the Canadian Society for Mechanical Engineering, 2013, 37, 71-88.	0.8	9
79	2-SMC of Electro-Hydraulic Drives Using the Twisting Algorithm. Applied Mechanics and Materials, 2012, 233, 131-134.	0.2	4
80	Analysis of Temperature's Influence on a Digital Displacement Pump's Volumetric Efficiency. Applied Mechanics and Materials, 2012, 233, 24-27.	0.2	3
81	Human mobile inverted pendulum transporter &#x2014; A mechatronic system case study. , 2011, , .		0
82	Design, Optimization and Analysis of Hydraulic Soft Yaw System for 5 MW Wind Turbine. Wind Engineering, 2011, 35, 529-549.	1.9	8
83	Analysis of and $H^{\infty}$ controller design for an electro-hydraulic servo pressure regulator. , 2011, , .		0
84	Design of energy efficient SMISMO-ELS control strategies. , 2011, , .		8
85	Preliminary findings of soft yaw concept. , 2011, , .		3
86	Modeling and Control of a Teletruck Using Electronic Load Sensing. , 2010, , .		4
87	Presenting a Multi-Level Superstructure Optimization Approach for Mechatronic System Design. , 2010, , .		0
88	Mechatronic Control Engineering: A Problem Oriented and Project Based Learning Curriculum in Mechatronic. , 2007, , 629.		0
89	Power Management in Hydraulically Actuated Mobile Equipment. , 2007, , 151.		1
90	Robust Electric Load Sensing Applied to an Open Circuit Axial Piston Pump. , 2006, , 1.		3

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91	Modelling and simulation of mobile hydraulic crane with telescopic arm. Australian Journal of Mechanical Engineering, 2005, 2, 105-116.	2.1	2
92	COMPARISON OF LINEAR CONTROLLERS FOR A HYDRAULIC SERVO SYSTEM. Proceedings of the JFPS International Symposium on Fluid Power, 2005, 2005, 449-454.	0.1	5
93	FEEDBACK LINEARISATION APPLIED ON A HYDRAULIC SERVO SYSTEM. Proceedings of the JFPS International Symposium on Fluid Power, 2005, 2005, 167-172.	0.1	1
94	An Optimisation Approach Applied to Design the Hydraulic Power Supply for a Forklift Truck. , 2004, , .		0
95	Robust and Adaptive Resolved Motion Control of a Hydraulic Loader Crane. , 2003, , 505.		1
96	Using an Electrically Scale Model to Evaluate Control Strategy for Damping of Hydraulically Driven Off-Highway Vehicles. , 2003, , 81.		0
97	Control of Oscillations in Electrically Driven Skid Steer Vehicles. , 2003, , 17.		1
98	Robust Position Tracking for Electro-Hydraulic Drives Based on Generalized Feedforward Compensation Approach. Applied Mechanics and Materials, 0, 233, 100-103.	0.2	3
99	Sliding Control with Chattering Elimination for Hydraulic Drives. Applied Mechanics and Materials, 0, 233, 168-171.	0.2	1
100	Method for Lumped Parameter Simulation of Digital Displacement Pumps/Motors Based on CFD. Applied Mechanics and Materials, 0, 397-400, 615-620.	0.2	1